location of structural facilities, but allows for replacement with the most efficient, least-cost technology;

7) Costs should be forward-looking, i.e, they should not reflect the company's embedded costs;

8) Cost studies, at a minimum, should be performed for the total output of specific services and preferably at the level of basic network functions from which services are derived;

9) The same long-run incremental cost methodology should apply to all service, new and existing, regulated and non-regulated, competitive and non-competitive.[16]

Based on these guidelines and principles, Ms. Dismukes developed costs using the TSLRIC methodology adopted by the LPSC allowing for the recovery of shared and common costs (the TELRIC methodology). Ms. Dismukes recommended that the LPSC set the prices for UNEs and interconnection using the costs reflected on her revised Exhibits KHD-9 and KHD-10.[17]

Revised Exhibit KHD-9 presents Ms. Dismukes' recommendations for recurring costs using BellSouth's cost model. Ms. Dismukes recommended a cost for an unbundled 2-wire voice grade loop of $19.35. BellSouth's requested $27.15 for the same element. All elements produced by BellSouth's cost studies with Ms. Dismukes' recommended changes to the studies are set forth on revised Exhibit KHD-9. For the port, Ms. Dismukes recommended a cost of $2.20. BellSouth requested a cost of $2.61.

Ms. Dismukes' recommended nonrecurring charges and disconnect charges are shown on revised Exhibit KHD-10, using BellSouth's model. Ms. Dismukes recommended that the disconnect charges be removed from the nonrecurring charges and collected at the time of

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[16] Pre-filed testimony of Kimberly Dismukes, at pages 7 & 8.

[17] These revised Exhibits are part of Ms. Dismukes' pre-filed testimony filed as part of the Costing Docket as LPSC Exhibit No. 2, and is included in BellSouth's 271 Application to the FCC.

disconnection. With respect to the loop and the port, Ms. Dismukes' recommendations reflect the cost of these elements assuming the loop and the port are not a combined offering.

The Costing Docket came before the LPSC at its October 22, 1997 Open Session for a vote. AT&T requested that the LPSC delay ruling on the Administrative Law Judge's Final Recommendation until the LPSC's November Open Session. After hearing oral argument from AT&T, BellSouth and the Staff, AT&T's request did not receive a motion by any Commissioner.

After hearing oral argument from AT&T, BellSouth, MCI and Staff, the LPSC voted to reject the Final Recommendation of the Administrative Law Judge dated October 17, 1997. By this same vote, based on the rationale of LPSC consultant Kimberly Dismukes, as set forth in her testimony pre-filed September 22, 1997, and her testimony at hearing on September 24, 1997, the LPSC adopted the "Stand Alone" cost-based rates presented by Ms. Dismukes in her revised Exhibits KHD-9 and KHD-10. Regarding vertical services, by this same vote, the LPSC voted to adopt Ms. Dismukes' recommended rate of $8.28 for all vertical features as set forth in the Staff's Post Hearing Brief. The LPSC determined that it is necessary to adopt the Stand Alone rates because the platform approach was rejected by the 8th Circuit. The Commission ordered the permanent, cost-based rates to replace the interim rates in BellSouth's SGAT and approved the rates for BellSouth's tariff. As noted above, BellSouth has incorporated into its SGAT the cost-based rates as determined by the LPSC in the Costing Docket.

VII. BELLSOUTH'S OSS IS FULLY FUNCTIONAL AND ALLOWS CLECS TO PLACE, CONFIRM, AND IMPLEMENT ORDERS.

Perhaps the single most hotly contested aspect of the LPSC's 271 Proceeding was the

sufficiency of BellSouth's Operational Support Systems, LENS, EDI and TAFI. To resolve the questions raised regarding these systems the LPSC conducted three separate technical conferences, and propounded approximately one hundred and fifteen (115) data requests concerning these systems.

The LPSC held a technical demonstration on August 13, 1997, at which the LPSC gave BellSouth the opportunity to demonstrate its operational support systems ("OSS"), and AT&T and MCI the opportunity to demonstrate what they perceived as problems with the OSS. Three of the Commissioners personally attended this OSS demonstration to gain first hand knowledge of the functionality of BellSouth's OSS systems. BellSouth demonstrated that its OSS systems were fully functional and allowed competitive local exchange carriers ("CLECs") to place, confirm, and implement orders to establish and provision local exchange service in Louisiana.

Following careful consideration and analysis, the LPSC concluded that the Operational Support Systems do, in fact, work and operate to allow potential competitors full nondiscriminatory access to the BellSouth system.

VIII. IOWA UTILITIES BOARD V. FEDERAL COMMUNICATIONS COMMISSION.

After the United States Court of Appeals for the Eighth Circuit issued its rulings in the *Iowa Utilities Board v Federal Communications Commission*[18] proceeding, the LPSC mandated that its costing docket and BellSouth's SGAT comply fully with the rulings. As shown above, the rates adopted by the LPSC in the Costing Docket, and BellSouth's SGAT, are in full compliance

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[18]*Iowa Utilities Board v Federal Communications Commission*, Case No. 96-3321, Eighth Circuit Court of Appeals.

with these rulings.

IX. THE LOUISIANA PUBLIC SERVICE COMMISSION IS PREPARED AND EQUIPPED TO ENFORCE EQUITABLE COMPETITIVE PRACTICES.

As discussed throughout these Comments, the LPSC took an aggressive, progressive strategy to open the local loop to competitive entry. Toward this end, at its April 13, 1994 Open Session, the LPSC adopted a policy statement dealing with the development of rules and regulations to open the local exchange market to competitive entry.

A. Procedural History of the Competition Docket

In furtherance of the policy adopted by the LPSC, it formally opened Docket U-20883, Louisiana Public Service Commission, ex parte, *In re: The development of rules and regulations applicable to the entry and operations of and the providing of service by competitive and alternative access providers in the local intrastate and/or interexchange telecommunications markets in Louisiana* (the "Competition Docket").[19]

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[19] The following parties filed formal interventions in this docket: Paramount Wireless Communications Corp. (Paramount Wireless), Wireless One, Inc., Louisiana Cable Television Association (LCTA), AT&T Communications of the South Central States, Inc. (AT&T), Shreveport Cellular Telephone Company (Shreveport Cellular), Lafayette Cellular Telephone Company (Lafayette Cellular) , Monroe Cellular Limited Partnership (Monroe Cellular), American Communication Services of Louisiana, Inc. (ACSI), MCI Telecommunications Corporation (MCI), East Ascension Telephone Company, Inc. (EATEL), BellSouth Telecommunications, Inc., d/b/a South Central Bell Telephone Company (SCB), The Council of the City of New Orleans, McCaw Cellular Communications, Inc. (McCaw Cellular), LDDS Metromedia Communications (LDDS), Teleport Communications Group Inc. (TCG), the Small Company Committee of the Louisiana Telephone Association (SCC), Sprint Communications Company L.P. (Sprint), Reserve Telephone Co. (Reserve Telephone), Centennial Beauregard Cellular Corp. (Centennial Cellular), Entergy Services, Inc., Radiofone, Inc. (Radiofone), Metropolitan Fiber Systems of New Orleans, Inc. (MFS), Cameron Telephone Company, BellSouth Mobility, Inc. (BSM), Global Tel*Link, Inc. (Global), GNet Telecom, Inc. (GNet) and BRI, Inc. (BRI).

The LPSC held technical conferences in 1994 and 1995 where the parties presented issues to be considered in the Competition Docket, and reported on the status of competition in the local loop in Louisiana. At the conclusion of the technical conferences, all parties were given an opportunity to submit written comments and suggested proposed local competition regulations. The parties submitted proposed regulations.

On September 1, 1995, after analyzing and considering the written comments and suggested proposed regulations filed by each party, the LPSC Staff issued an initial draft of proposed regulations for competition in the local telecommunications market. The LPSC staff solicited written comments and stipulations to these proposed regulations from all parties, to which the parties replied.

In order to obtain additional input from the parties, in September 1995, a second notice of amendment of procedural schedule was issued. This procedural schedule provided that the LPSC would issue a second draft of the proposed regulations in October 1995, followed by the parties filing written stipulations to the proposed regulations. After considering each party's comments obtained from the conference, the Staff issued a second draft set of proposed regulations in October 1995. The parties filed comments and/or written stipulations to the second proposed regulations in October 1995. On October 24, 1995, the LPSC issued a rulemaking procedural schedule, establishing comment and reply comment periods to ensure that all parties had ample opportunity to comment on the proposed regulations.[20]

After considering each party's filed comments to the second proposed regulations, the Staff

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[20]On November 17, 1995, SCB filed an Objection to October 24, 1995 Revised Procedural Schedule. This objection was later withdrawn by SCB.

released a third draft of the proposed regulations on November 1, 1995. Following further consideration of all comments and reply comments filed by the parties, staff issued its final proposed regulations on January 18, 1996. The LPSC held a Public Hearing on these proposed regulations on February 13, 1996 to afford each party an opportunity to present oral arguments on how the Commission should modify the proposed regulations. At the conclusion of this hearing, all parties and the general public were invited to file proposed amendments to the proposed regulations. After reviewing and considering the extensive record developed in the Competition Docket, the LPSC adopted its Regulations for Competition in the Local Telecommunications Market by General Order, dated March 15, 1996.

B. LPSC Local Competition Regulations Promote Competitive Entry into the Local Loop

The LPSC Competition Regulations are consistent with the Act and the FCC regulations adopted thereunder. The purpose of the LPSC Competition Regulations is to foster the transition from monopoly to competitive local telecommunications markets in Louisiana. The LPSC imposed the Competition Regulations in order to encourage competitive entry, preserve and advance universal service, protect the public safety and welfare, ensure the continued quality of telecommunications services, and safeguard the rights of consumers while ensuring that the rates charged and services rendered by telecommunications services providers are just and reasonable.

The LPSC recognizes that, given current local telecommunications markets, competition in every segment of these markets will take time to develop. It is likely that the introduction of competitive services will occur asymmetrically with new entrants initially targeting high volume, heavily populated urban areas, and other selected high-profit areas, and that, therefore, the

benefits resulting from competition will be seen first in those areas. However, it is the policy of the LPSC that all Louisiana consumers should benefit from competition. Although a limited exemption is proposed for incumbent local exchange carriers with 100,000 access lines or less in Louisiana, the LPSC encourages competition throughout Louisiana.

The Competition Regulations are designed to ensure that Louisiana consumers benefit from competition. Louisiana consumers should benefit from competition in the local loop by having greater choices among telecommunications products, prices and providers. Through the development of effective competition, which promotes the accessability of new and innovative services at non-discriminatory prices consumers can and are willing to pay and which results in wider deployment of existing services at competitive prices, the public interest will be promoted.

The LPSC Competition Regulations contain specific provisions requiring all competitive carriers to have number portability that ensures that an end-user customer of local telecommunications services, while at the same location, will be able to retain an existing telephone number without impairing the quality, reliability, or convenience of service when changing from one provider of local telecommunications services to another (Section 801). These provisions are consistent with the Act and the FCC regulations.

The LPSC Competition Regulations provide that competing networks shall be interconnected so that customers can seamlessly receive calls that originate on another carrier's network and place calls that terminate on another carrier's network without dialing extra digits, paying extra, or performing any other action out of the ordinary that is not required when dialing on his/her own carrier's network. The Regulations provide that competing telecommunications services providers

shall be interconnected with the ILECs in a manner that gives the TSPs seamless integration into, and use of local telephone company signaling and interoffice networks in a manner equivalent to that of the ILECs. Interconnection includes access to switches, databases, signaling systems and other facilities or information associated with originating and terminating communications (Section 901). These provisions are consistent with the Act and the FCC Regulations.

The Competition Regulations provide that all TSPs shall be able to purchase desired features, functions, capabilities and services promptly and on an unbundled and non-discriminatory basis from all other TSPs provisioning services in the State (Section 1001). These provisions are consistent with the Act and the FCC regulations. The Competition Regulations also contain resale provisions consistent with the Act and the FCC Regulations (Section 1101).

In addition, the Competition Regulations contain enforcement provisions that ensure that all TSPs, including the ILECs, comply with the mandates of number portability, interconnection, unbundling and resale so as to ensure that all competing carriers are able to offer service on the same footing as do the ILECs.

Since the Competition Regulations were initially adopted in March, 1996, they have been amended twice in order to comply with the rulings of the Eighth Circuit Court of Appeals and the FCC regulations promulgated under the Act.

X. CONCLUSION.

The LPSC supports BellSouth entry into the interLATA long distance market because consumers in Louisiana in both the local and long distance markets will benefit. As shown above, BellSouth has satisfied all specific statutory prerequisites to provide interexchange services in Louisiana, and such service would promote the public interest. Accordingly, BellSouth's application should be granted.

Respectfully submitted,

The Louisiana Public Service Commission

LAWRENCE ST. BLANC
EXECUTIVE SECRETARY

REPLY TO COMMENTS ON BELLSOUTH'S APPLICATION FOR SECTION 271 AUTHORITY IN SOUTH CAROLINA

Declaration on Behalf of BellSouth

by

Richard L. Schmalensee

November 14, 1997

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DECLARATION OF RICHARD L. SCHMALENSEE

I. INTRODUCTION

1. My name is Richard L. Schmalensee. I submitted a declaration earlier in this proceeding, which included my *vitae*.[1]

2. Counsel for BellSouth has asked me to review comments by economists as they relate to the public interest standard of the Telecommunications Act of 1996 ("the Act") for BellSouth's entry into the long distance market in South Carolina. These economists are Kenneth D. Baseman and Frederick R. Warren-Boulton (for MCI), William J. Baumol (for AT&T), Robert E. Hall (for MCI), R. Glenn Hubbard and William H. Lehr (for AT&T), Marius Schwartz (for the Department of Justice), and Carl Shapiro (for Sprint).[2] Here I report on the results of my review.

3. In this report, I focus on the issues that were the primary concern of my original declaration[3]—the current state of competition in the long distance market and the effect on

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[1] Richard L. Schmalensee, "BellSouth's Prospects for Success in the InterLATA Market," Declaration on Behalf of BellSouth, CC Docket No. 97-208 (August 18, 1997).

[2] Declaration of Kenneth C. Baseman and Frederick R. Warren-Boulton on Behalf of MCI Telecommunications Corporation, MCI Exhibit E, CC Docket No. 97-208 (October 20, 1997); Affidavit of William J. Baumol on Behalf of AT&T Corp., AT&T Exhibit A, CC Docket No. 97-208 (October 20, 1997); Declaration of Robert E. Hall on Behalf of MCI Telecommunications Corporation, MCI Exhibit E, CC Docket No. 97-208 (October 20, 1997); Affidavit of R. Glenn Hubbard and William H. Lehr on Behalf of AT&T Corp., AT&T Exhibit A, CC Docket No. 97-208 (October 20, 1997); Marius Schwartz, "The 'Open Local Market Standard' for Authorizing BOC InterLATA Entry: Reply to BOC Criticisms, Supplemental Affidavit on Behalf of the U.S. Department of Justice, CC Docket No. 97-208 (November 7, 1997); Declaration of Carl Shapiro on Behalf of Sprint, CC Docket No. 97-208 (October 20, 1997).

[3] I do, however, have to respond to a comment by Professor Hall that is outside the scope of my declaration. I have presented evidence from the cellular market showing that the Bell Operating Companies have been unwilling or unable to distort competition in that market. (P. S. Brandon and R. L. Schmalensee, "The Benefits of Releasing the Bell Companies from the Interexchange Restrictions," *Managerial and Decision Economics*, Vol. 16, No. 4 (July-August 1995), pp. 349-364) Professor Hall implies that he agrees. However, dismisses the (continued...)

competition of having carrier access charges set above costs.[4] My principal conclusions are the following:

- In response to my evidence that AT&T charges full basic rates for most of its residential customers and that AT&T has been increasing the average rates paid by its residential customers, the incumbent long distance carriers' economists reply either with irrelevant and misleading data (*e.g.*, data which combine both residential and business customers), or they simply assert that the market structure implies that the market must be competitive. I stand by my findings.

- In my declaration, I found that AT&T's current long distance rates for residential customers significantly exceed costs. Some comments argued that the market structure implies that the market must be competitive, so my findings must be wrong. Professors Hubbard and Lehr present alternative estimates of price-cost margins. With one minor concession, I stand by my original findings.

- In my declaration, I disproved the naïve price squeeze argument; I showed that, even if carrier access charges are priced above costs, a local exchange carrier cannot increase access profits if its long distance affiliate were to take toll demand away from a rival. I have found that most, but not all, of the commenters understand this point.

- Most commenters also appear to understand that a local exchange carrier would increase profits by having its long distance affiliate cause an expansion in industry output. However, most of them miss the point that such an expansion would increase economic welfare, and they misinterpret the effect as an undesirable competitive advantage.

(...continued)

relevance of that evidence by claiming that cellular markets were at capacity. His claim is false. Cellular companies can and do increase capacity continually by adding cell sites or by deploying digital technology.

[4] My original declaration also explained BellSouth's strengths as a competitor in the long distance market. Since I found no challenge to these findings, I need not deal with them here.

4. In Section II, I discuss the comments relating to the competitiveness of the residential long distance market. Section III deals with the access charge issues.

II. THE RESIDENTIAL LONG DISTANCE MARKET IS NOT FULLY COMPETITIVE

5. In my declaration, I presented data which showed the following:

- "AT&T raised its interstate basic rates by 22 percent between 1993 and 1996, even though average access charges for the interexchange carriers fell by nine percent in that period." (Declaration, ¶ 9)
- Even accounting for discount calling plans, the average rate paid by AT&T's residential customers increased 12 percent in that period. (Declaration, ¶ 11)
- As of 1996, 62 percent of AT&T's residential customers in the states served by BellSouth faced full basic rates. (Declaration, ¶ 10)
- AT&T's rates exceed its costs for a substantial portion of its residential customers. (Declaration, ¶¶ 15)
- AT&T's price-cost margin for residential customers as a whole is about 8 cents per minute.

6. No one effectively refuted these findings. Instead, they either report statistics that miss the point or give comments that are misleading, as I explain below.

A. Professors Hubbard and Lehr Regarding the Residential Long Distance Market

7. Professors Hubbard and Lehr report an index of AT&T's annual interstate average revenue per minute net of access from 1984 to 1996. (Hubbard and Lehr, Figure 3) Even their own data show an increase in rates net of access from 1995 to 1996. But there are at least two reasons to dismiss the relevance of their data to my point. First, their data combine residential and business customers. It is plausible that AT&T reduced rates relative to access charges for business customers. (See below.) In fact, business customers were the principal beneficiaries

of competition for long distance services. Yet, as Professor Baumol points out, the interests of smaller business and residential customers "should be the prime concern of regulation." (Baumol, ¶ 22) Second, even data on average revenue per minute for residential and business combined gives a highly misleading picture of rate changes. In the 1980s, AT&T increased its private line rates relative to its rates for switched services. In response, as large business customers migrated from private line services to heavily volume-discounted switched services, the average revenue per minute for switched services as a whole would have fallen even if AT&T had not reduced switched service prices.

8. Professors Hubbard and Lehr also show an annual index of average revenue per minute, deflated for inflation, for what they call consumer dial direct long distance, business outbound domestic toll, and business inbound domestic toll. (Hubbard and Lehr, Figure 4) I assume that these data are also for interstate services. I interpret business outbound domestic toll to be WATS and Megacom, and I interpret business inbound domestic toll to be 800 service. I cannot tell with confidence how to interpret what they call "consumer dial direct long distance," which might be for residential customers alone or might be for all message toll service customers—residential and business combined. The latter interpretation is more likely, since they say that the figure with all three data series shows "benefits to *all* types of *consumers*." (Hubbard and Lehr, ¶ 31, emphasis added) In other words, they use the term "consumers" to include both business and residential customers. What this figure does verify is my statement above that business customers have benefited much more from competition than have customers paying message toll rates. They show that AT&T's average revenue per minute declined much more for WATS and for 800 service than it did for message toll service.

9. Do their data refute my findings that AT&T's residential customers paid more in 1996 than they did in 1993, even as access charges fell? No, for several reasons. First, even though another of their figures extends through 1996 (and shows an increase in rates net of access from

1995 to 1996),[5] the figure with so-called "consumer" dial direct long distance ends in 1995, before AT&T's two rate increases in 1996 of 4.3 percent and 5.9 percent.[6] Second, as I mention above, it is not clear that their data series for what they call "consumer" dial direct long distance is really for residential customers only; it is more likely to be for residential and business customers combined. Third, since that series is for "dial direct," it excludes any increases in directory assistance, calling card and other operator-assisted services, for which residential customers also pay. Fourth, although it shows decreases in real average revenue per minute, it is not net of access charges, so it does not show that rates decreased as much as access charges decreased.

10. Professors Hubbard and Lehr go on to display AT&T prices for customers with three different volumes of usage. (Hubbard and Lehr, Figure 5) They claim that their figure "demonstrates that all classes of residential customers—both high and low usage—benefited from these price declines." (Hubbard and Lehr, ¶ 31) In one sense, I find their Figure 5 gratifying, because it verifies my finding that AT&T increased its basic rates from 1993 to 1996. It even shows an additional rate increase from 1992 to 1993 that I did not mention.

11. In another sense, their figure is grossly misleading. Elsewhere in their comments, Professors Hubbard and Lehr state the following: "Because it is a complex task to compare complex baskets of services . . . we advocate focusing on the actual prices consumers pay as measured by the average revenue per minute realized by long distance carriers." (Hubbard and Lehr, ¶ 32. Also see ¶ 119) Yet, contrary to their own position, their Figure 5 presents not

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[5] Hubbard and Lehr, Figure 3.

[6] Regarding the February 1996 increase, see "AT&T to Raise Basic Prices an Average 40c a Month," *Bloomberg News Services*, February 16, 1996; see also "AT&T Increases Basic Rates, Extends Discount Plans," *Telecommunications Reports*, February 26, 1996, p. 27. Regarding the December 1996 increase, see "AT&T Follows MCI, Sprint with Long Distance Rate Increases," *Telecommunications Reports*, December 2, 1996. Professors Hubbard and Lehr criticize Professor MacAvoy for selectively choosing starting and stopping dates for his time series, yet they appear to have done so themselves.

actual customer costs per minute but the best rate available to a customer in each usage group.[7] A crucial point I made in my declaration is that AT&T has raised basic rates, knowing that only a minority of its residential customers takes optional calling plans. The costs to consumers of obtaining information and making a decision to take an optional calling plan are an important part of the market structure that determines market behavior and performance. Ignoring this fact will lead to invalid conclusions.

12. Professors Hubbard and Lehr also offer comments on my declaration specifically. First, they say that increases in long distance carriers' costs other than access "may offset any savings associated with reductions in access charges." (Hubbard and Lehr, ¶ 119) Although what they say is a theoretical possibility, they present no evidence that it is true, and my declaration presented unrefuted evidence that it was not true in the past and is thus unlikely to be true in more recent years. (Declaration, ¶ 9) Further, their data show that AT&T's non-access costs per minute fell between 1988 and 1994, which verifies my evidence on the subject. (Hubbard and Lehr, Figure 7)

13. Second, they repeat their position that average revenue per minute is "a superior summary statistic for assessing price trends." (Hubbard and Lehr, ¶ 119) Their reason for thinking so is that "There may be changes in demand patterns that make it difficult to associate reductions in access charges directly to changes in tariffed prices." (Hubbard and Lehr, ¶ 119) Yet their position contradicts the standard theory of price indices. The possibility of changes in demand patterns is a *disadvantage* of using average revenue per minute as a measure of price changes, as Professor Hall acknowledges. (Hall, ¶ 127)

14. The backup position of Professors Hubbard and Lehr—that, lacking data on average revenue per minute, one should use "the least-cost options for delivering service to each

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[7] Although their text does not admit it, it is obvious that the figure portrays merely "best available" rates rather than average revenue per minute: the rate for the low-usage group is exactly 15 cents in 1997, when AT&T introduced its One Rate Plan with that rate. Clearly, less than 100 percent of AT&T's low-usage customers have signed up for that plan.

category of consumer" (Hubbard and Lehr ¶ 119)—is indefensible in this market. When would such an approach be useful? I can think of two situations. The first situation is where one could anticipate with confidence that any new superior calling plan would promptly attract almost all of the eligible consumers. The second situation is where the service providers automatically shifted every consumer to the cost-minimizing plan for that consumer each month. Neither of those situations describes the current long distance market. As I mentioned in my declaration, the fraction of AT&T residential customers subscribing to calling plans has increased by an average of only 4.5 percentage points per year. (Declaration, ¶ 14)

15. Third, they claim that they refuted my finding that AT&T increased rates paid by residential customers. (Hubbard and Lehr, ¶ 119) Yet, as I show above, they did no such thing.

16. Fourth, they object that I overestimated margins in long distance. They say, "he fails to explain why margins of this magnitude—if actually realized—would fail to attract significant entry from the many potential entrants into long distance services." (Hubbard and Lehr, ¶ 121) To the contrary, I explained that such profit opportunities *are* causing the expansion of the small-carrier group at AT&T's expense. (Declaration, ¶ 9) I should also note that I used AT&T's and Professor Hall's *own* data to show that prices are above costs for a large portion of AT&T's residential customers. To calculate profit margins, I used the technique for estimating costs suggested by Professor Hall: find the lowest prices charged by the long distance carriers. (Hall, ¶ 147) Professors Hubbard and Lehr present an alternative cost estimate of 14 cents per minute, but they do not reveal how they get their estimate. (Hubbard and Lehr, ¶ 122) If they are correct that industry costs are 14 cents per minute, then they are faced with an unexplained quandary: how can Frontier, Unidial, and Wiltel all survive with prices of 9.9 cents per minute to 10.9 cents per minute, with no monthly fee and no minimum charge? (Hall, ¶ 139) I am convinced that those smaller carriers can have costs no greater than about 10 cents per minute. They are clearly betting the firm that their costs are no higher than what they charge.

17. Professors Hubbard and Lehr also report that AT&T's average revenue per minute in 1996 for all switched services was 16.9 cents per minute. (Since this figure is for all switched services, it includes both business and residential customers.) If so, then AT&T's average

revenue per minute for residential customers should be in the same neighborhood or even higher. Although residential customers make more of their calls in off-peak periods than business customers do, residential customers receive much smaller discounts from basic rates than business customers do on average. That figure of 16.9 cents per minute is close to the figure of 18 cents per minute that I assumed in my profit margin calculations. To be conservative, let us assume for present purposes a profit margin of 6.9 cents per minute (16.9 cents minus 10 cents per minute), or 69 percent of industry costs. This conservative assumption does not change my qualitative conclusions. It is difficult to maintain the hypothesis that the long distance market is effectively competitive or that entry by a strong competitor would not cause a reduction in market prices when profit margins are so high. I return to the issue of AT&T's costs below.

18. Professors Hubbard and Lehr object to my discussion of the trends in long distance market shares. (Hubbard and Lehr, ¶ 120) I am baffled as to why they say that I claim that stable market shares are conducive or a precondition for collusion. My declaration reported that the share of the carriers other than the Big Three has been growing and that AT&T's share has been declining. (Declaration, ¶ 8) Clearly, the smaller carriers must be growing because there is a profit opportunity for them. I also explained that I infer that their profit opportunity derives from AT&T's setting supracompetitive retail prices, based on my analyses elsewhere in the declaration. (But also see the discussion in the next paragraph.) MCI's and Sprint's market shares have remained stable for several years, which suggests that, in spite of the profit opportunity offered by AT&T, they have decided that they would rather reap higher current profits with stable market shares than to risk disturbing the market's profitable price structure by pursuing increased market share. If AT&T is charging supracompetitive prices, and if MCI and Sprint are refraining from exploiting that profit opportunity by expanding their shares, then it calls for additional entry from BellSouth and other RBOCs to compete down the supracompetitive price levels, thereby increasing economic welfare.

19. Professor Hall suggests an alternative explanation to mine regarding why the smaller carriers are growing at the expense of AT&T. He suggests that the smaller carriers have lower

costs than AT&T. (Hall, ¶ 204) That hypothesis might be true. Professors Hubbard and Lehr estimate that AT&T's average costs are about 14 cents per minute. (Hubbard and Lehr, ¶ 122) In contrast, as Professor Hall points out (Hall ¶ 139) and as I highlight above, some of the resellers charge rates as low as about 10 cents per minute, with no minimum charge and no monthly subscription fee. Therefore, I concede the possibility that AT&T's costs substantially exceed those of smaller carriers. If so, this gross inefficiency is a potent reason to allow BellSouth and other RBOCs into the long distance market promptly. The economic welfare gain from wringing out 40 percent excess costs from the carrier with over half the market would certainly exceed all other sources of economic gains or losses being discussed in this proceeding. Therefore, I appreciate the effort of Professors Hubbard and Lehr in estimating AT&T's costs. I hope that, in the future, they can build our confidence in their estimate by providing more details and support for their estimation procedure.

20. Thus, two alternative explanations could lead to the facts that the market share of the small carriers is growing and AT&T's is shrinking. Importantly, regardless of which alternative explanation for the market share trends is true, the policy prescription should be the same: allow RBOC entry into the long distance market. It is gratifying for once to find a situation in which competing hypotheses yield the same policy prescription rather than conflicting policies.

B. Professor Hall Regarding the Residential Long Distance Market

21. Professor Hall also makes errors regarding pricing for residential customers. He shows that long distance prices for business and residential customers together have decreased over time. (Hall, ¶¶ 126-129) No doubt they have. That is not the issue, since local exchange carriers have been reducing access charges. He does go on to discuss changes in average revenue per minute relative to changes in access charges, but again he reports results that combine business and residential customers. (Hall, ¶¶ 132-136) Such comparisons hide the increases in rates that residential customers have paid in recent years.

22. Professor Hall confirms my finding that the incumbent long distance carriers increased basic rates in the past few years, until the local exchange carriers reduced their access charges substantially in 1997. (Hall, ¶ 137)

23. Professor Hall asserts that "most residential customers take advantage of flat-rate low-price plans." (Hall, ¶ 142) His statement is unsupported. It is a general statement regarding residential customers in total, yet he only reports data for MCI. My declaration showed that the statement is false regarding AT&T residential customers. Since 62 percent of AT&T's customers in BellSouth states faced full basic rates in 1996 (Declaration, ¶ 10), and, since AT&T only recently introduced flat-rate plans, it is inconceivable that by now most AT&T residential customers "take advantage of flat-rate low-price plans." Further, the data he does report for MCI is regarding all MCI calling plans, not its flat-rate plans. Many of MCI's calling plans are not flat-rate plans. MCI's Friends & Family plans and its Sure-Save Reach plan instead specify discounts from basic rates. For these plans, if basic rates rise, then rates paid by subscribers to these plans also rise. In addition, MCI recently reduced the discounts it provides to Friends & Family plan subscribers.

24. Professor Hall reports that 78 percent of MCI's residential customers subscribe to calling plans (Hall, ¶ 142), but he does not reveal what fraction of customers actually *receive* discounts or what size of discount these customers receive. The data he reports for MCI is misleading. Note his careful phrasing: "About 22 percent of MCI's residential customers pay the standard rate—the remaining 78 percent use plans with lower rates, some of which depend on volume." (Hall, ¶ 142) For many of MCI's plans, unless a plan subscriber has a high volume of usage—either in total or to particular customers—then the subscriber can still pay prices that equal or exceed basic rates.[8] In any case, Professor Hall's statistic is of little comfort

[8] For instance, subscribers to MCI's Friends & Family Everywhere or Friends & Family Option C would have to make calls worth at least $9.50 per month to receive any discounts. As another example, if a person subscribes to MCI's AnyTime Option, they pay $9.90 for sixty minutes of interstate calls. That amounts to 16.5 cents per minute. If one of those subscribers were to make less than 52 minutes of calling, then their average rate would exceed 18.9 cents per minute, the average direct-dialed basic rate I calculated for AT&T's customers in the

(continued...)

to residential customers as a whole, since a far smaller fraction of residential customers subscribe to MCI than subscribe to AT&T, and, as I have reported, 62 percent of AT&T's residential customers in BellSouth's states face full basic rates. Even if every one of MCI's residential customers who has a calling plan actually were to receive a discount, then 55 percent of residential customers for AT&T and MCI combined still face full basic rates.[9]

25. As Professors Hubbard and Lehr did, Professor Hall advocates using average revenue per minute as the relevant measure of rates, though as I mention above, he qualifies his advocacy. (Hall, ¶¶ 127, 205) Yet, in an attempt to de-emphasize the importance of basic rates, he contradicts his own position by stressing that lower rates are *available* to customers via optional calling plans. (Hall, ¶¶ 139-141, 151, 196, 198, 200-201, 206)

26. Professor Hall's discussion of the availability of calling plans and the percentage of customers who currently take them does not address one of my principal points: the average rate that AT&T residential customers paid in BellSouth states increased about 12 percent from 1993 to 1996. Any improvement in the terms of calling plans and any increase in the percentage of residential customers who take them has been insufficient to prevent that increase in rates paid. (Declaration, ¶ 11) Professor Hall does not present any data that refute this finding.[10] He ignores my calculations of the change in AT&T's rates for residential customers. I have accounted for the discounts that residential customers received in 1993 and 1996.

(...continued)

BellSouth states. Parallel conclusions hold for MCI's new MCI One flat-rate plans, since they specify a $5 minimum, which the customer must pay if usage in a particular month falls below $5. In addition, subscribers to MCI's original Friends & Family plan receive only a five percent discount, and then only for calls to other MCI subscribers. (See CCMI, "Guide to Networking Services" (August 1997).)

[9] This calculation assumes that AT&T's and MCI's national shares of residential customers in 1996 were 69.9 percent and 13.7 percent, respectively. (Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, "Long Distance Market Shares" (July 1997), Table 9.) It also assumes that their market shares in BellSouth were equal to their national market shares and that MCI's fraction of residential customers with calling plans in BellSouth equals the fraction nationally.

[10] Professor Hall's summary of my findings omits this result. (Hall, ¶ 203)

Professor Hall explains that one of the potential problems with using average revenue per minute as a measure of price changes is that it entangles rate changes with what he calls "mix effects." (Hall, ¶ 127) That is, changes in demand patterns cause the average revenue per minute to change even if no rates have changed. The primary difference between my estimates of rate changes and the changes one would calculate from average revenue per minute is that I have eliminated those "mix effects" that distort the average revenue per minute. Based on Professor Hall's own logic, he should rely more on my estimates than on any data on average revenue per minute.

27. Professor Hall criticizes my use of toll billing data from PNR and Associates. (Hall, ¶¶ 143-145, 205) He claims that "the PNR sample is badly biased, through its construction, in favor of smaller users."[11] AT&T presented results to the FCC using PNR's data, and it did not warn the FCC of any deficiencies.[12] For my declaration in this proceeding, I used PNR's 1996 data, not the 1995 data on which Professor Hall comments. He appears to be unaware that the 1996 data include weights to make the sample representative, and I used the weights in my calculations.[13] His criticism is thus moot.

28. Professor Hall goes on to say the following:

> I do not believe that the PNR data are usable to measure actual residential prices. Instead, I believe that the best way to measure those prices is by revenue per

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[11] Professor Hall also claims to have verified his presumption that the sample is biased by selecting too many low-usage customers. He says, regarding the 1995 PNR data, "According to PNR, about 54 percent of MCI residential customers spent $10 or less on long distance. In the MCI data, the corresponding fraction is only 32." I believe he has misinterpreted the PNR data. According to PNR and Associates, the results he received from PNR were for all customers who made calls using MCI, not just those who presubscribed to MCI. Naturally, customers who occasionally use MCI on a non-presubscribed basis will have low usage. He compared a result for that group with a result from internal MCI data for MCI presubscribed customers. Thus, his comparison is invalid.

[12] Letter from C.L. Ward to W.F. Caton, March 9, 1995; Re: Ex Parte Presentation (CC Docket Nos. 79-252, 93-197, 80-286) D.J. Quinn, "The Light User Segment of the Long Distance Market," March 8, 1995.

[13] PNR and Associates constructed these weights using household data on age, income, household size, and census region.

> minute. As I showed in Section III, revenue per minute has fallen every year since 1985. (Hall, ¶ 205)

29. The above statement is highly misleading. First, as I note above, my calculations using the PNR data yield results similar to those which data on residential average revenue per minute would show, except that I remove the effects of changing demand patterns, which avoids a disadvantage of average revenue per minute that Professor Hall mentions. I do not use "theoretical calculations based on price plans and hypothetical distributions of customers among plans," as he appears to presume. (Hall, ¶ 205) Rather, using the 1996 data from PNR and Associates, I compare the prices actually paid by AT&T residential customers with what they would have paid for their specific calls under basic rates. Second, his statement gives the reader the impression that he showed in his Section III that residential average revenue per minute declined every year since 1985. Yet his Section III showed no such thing. Instead, it showed average revenue per minute for residential and business customers combined. Since business customers have benefited from much larger rate decreases than residential customers have, his aggregate data tells us nothing about average revenue per minute for residential customers alone.

30. Professor Hall also comments that up to a quarter of residential customers make no toll calls in a given month. Although that might be roughly correct, it does not affect any conclusions. A given customer's usage varies from one month to the next. Very few customers make no toll calls for an entire year; *i.e.*, the expected usage of almost all customers is positive. While some customers make no toll calls in a month—and thus their usage is below their mean in that month—others make more toll calls than their mean. A month's data is representative of the distribution of calling by all residential customers. Contrary to the impression he gives, Professor Hall's comment therefore does not imply that my statistics are invalid.

31. Professor Hall claims that my "discussion of AT&T's One Rate plan has been rendered completely obsolete by the One Rate Plus plan, which prices all long-distance calls by 10 cents per minute. This plan was in existence when Professor Schmalensee wrote, but he ignored it." To set the record straight, at the time I wrote my declaration, AT&T's One Rate Plus plan was